



# Carbon Nano Discs / Nano Cones (annealed)

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06-0725 Carbon nanodiscs / nanocones (annealed)

250mg  
1g

Sold for research purposes only. Patent US2003/0091495A1

**Production method:** pyrolysis of hydrocarbons using a patented plasma torch process. As-produced product is then annealed at 2500 – 2700°C

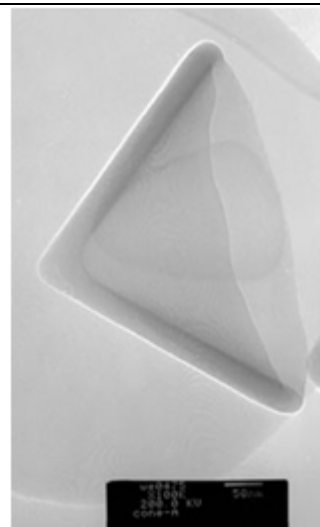
**Composition:** as-produced or annealed product is a mixture of discs and cones  
Carbon cones ca. 20 wt%  
Carbon discs ca. 70 wt%  
Carbon black ca. 10wt% (impurities)

**Thermal Stability:** Carbon cones . discs are stable in air up to 600°C.

**Carbon cones** are hollow structures exclusively made of carbon and having a conical shape. They are very similar in structure to multi-wall carbon nanotubes. Their walls can be described as a stacking of conical carbon layers with a graphite-like structure.

Carbon cones have well defined angles. Only five different types of cones - with angles close to 19.2, 38.9, 60, 84,6 and 112,9 degrees - are theoretically possible. All are present in Strem's product.

Cones length: 300 - 800 nm  
Wall thickness: 20 - 50 nm  
Maximum base diameter: 1-2 microns

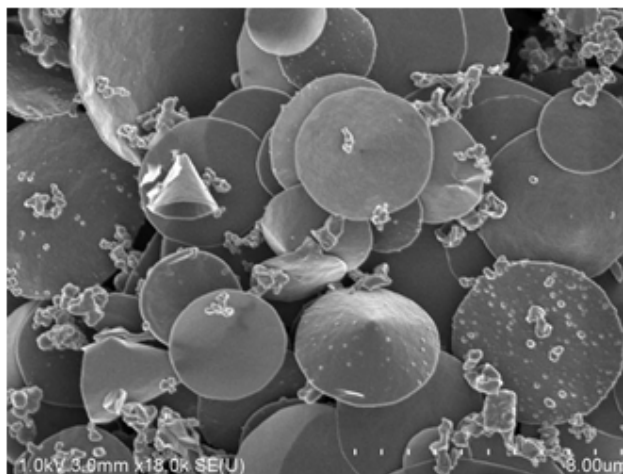


TEM bar 50nm

Carbon discs are mixed with carbon cones

Disc diameter: 0.8 - 3 microns  
Disc Thickness: 20–50 nm.

They can be considered as quasi 2D-materials.



SEM of carbon cones and discs

Visit [www.strem.com](http://www.strem.com) for new product information and searchable catalog.

## Strem Chemicals, Inc.

7 Mulliken Way  
Newburyport, MA 01950-4098  
U.S.A.  
Tel.: (978) 499-1600  
Fax: (978) 465-3104  
Email: [info@strem.com](mailto:info@strem.com)

Nanocones1109

## Strem Chemicals, Inc.

15, rue de l'Atome  
Zone Industrielle  
67800 BIRSCHHEIM France  
Tel.: (33) 03 88 62 52 60  
Fax: (33) 03 88 62 26 81  
Email: [info.europe@strem.com](mailto:info.europe@strem.com)

## Strem Chemicals, Inc.

Postfach 1215  
77672 KEHL  
Germany  
Telefon: 0 78 51/ 7 58 79  
Email: [info.europe@strem.com](mailto:info.europe@strem.com)

## Strem Chemicals UK

48 High Street  
Orwell, Royston  
England SG8 5QN  
Tel.: 01223 207430  
Fax: 01223 208138  
Email: [stremchemicals.uk@btinternet.com](mailto:stremchemicals.uk@btinternet.com)